

# MERLIN CCC: January 2019 TED Talk Film Overview Notes 2

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Topic: Consciousness



### Key Points

- How does consciousness happen? Somehow in each of our brains, the combined activity of our millions of neurons produces a unique conscious experience.
- Without consciousness, there is no world, no self, nothing at all, no suffering, no joy. By virtue of being alive, it also seems that other organisms experience consciousness. (*Implied: Consciousness is only possible if life exists. If there is no consciousness, then there is no life, no world or anything else for that matter.*)
- Our conscious experiences of the world around us and ourselves within it are really just controlled hallucinations that happen with, through, and because of our living bodies. What constitutes “reality” is only hallucinations that we all agree upon.
  - Our experiences of the world around us and ourselves within it are kinds of controlled hallucinations that have been shaped over years of evolution to keep us alive and world full of danger and opportunity. *We predict ourselves into existence.*
- Our most basic experiences of being an embodied organism or self are deeply grounded in the biological mechanisms involved in keeping us alive. If we follow this idea through to its logical end, then we can see that all of our conscious experiences (since they all depend on the same mechanisms of predictive perception), stem from this basic drive to stay alive. We experience our the world and our selves, with, through, and because of our living bodies.

### How do We Explain Consciousness?

- At one time people thought that the property of being alive could not be explained by physics and chemistry. That life had to be more than just mechanism. But people no longer think this. Physics and chemistry can explain it. Why can't we do the same with consciousness? Consciousness can be explained by looking at our biological

and neurological mechanisms. Nothing mysterious or magical needs (nor ought) to be brought into the equation.

- What should a science of consciousness try to explain? What are the properties of consciousness?
  - Consciousness as experiences of the world around us (e.g., sensory data) — with the important idea of the brain as a "prediction engine"
    - We experience consciousness as the world around us in two ways: data coming in and data going out; perception (and conscious experience) is a process of informed guesswork.
  - Consciousness as self (e.g., specific experience of being you, me, etc.)
    - We experience consciousness as self in two ways: a self based on signals from outside our bodies, and a self based on signals from within.

### Consciousness as Experiences of the World Around Us

- The brain (as a prediction engine) has to interpret streams of electrical impulses which are only indirectly related to things in the world. Perception (figuring out what's there) has to be a process of informed guesswork where brain combines sensory signals with its prior expectations or beliefs about the way world is to form its best guess about what those caused those signals.
  - *The brain can use new predictions to change what we consciously experience.*  
*Ex: "I think Brexit is a really terrible idea"*
- Our perception (and conscious experience) depends just as much, if not more, on perceptual predictions flowing out of the brain. We don't just passively perceive the world, we actively generate it. The world we experience comes as much, if not more, from the inside out as from the outside in.
- When perceptual predictions are too strong, then the world looks very much like the world we experience when in altered states or psychosis. When they are "normal" then that is what we — who are not in altered states or experiencing psychosis call "reality."
  - *Ex: Google virtual reality experiment where primed folk to see dogs on everything.*
- The brain (passively and actively) participates in its interpretation and prediction of the world, all of which are really just hallucinations.
  - If hallucination is a kind of uncontrolled perception, then perception is a kind of controlled hallucination. In other words, controlled hallucinations (where the brain's predictions are being reigned in by sensory information from the world) are perceptions & uncontrolled perceptions (where the brain's predictions are too strong) are hallucinations.

### Consciousness as Self

- Your experience of being a self (your specific experience of being you) is also a controlled hallucination generated by the brain. We do this in two ways: a self based on signals from outside our bodies, and a self based on signals from within.

## Outside Signals

- Being a person feels so unified and so continuous that it's easy to take it for granted. But we shouldn't take it for granted. The "self" is not really something that exists...it just feels that way based on our brains' predictive capabilities.
  - *Ex: Rubber hand experiment reveals that most people, over time, will experience the sensation that the fake rubber hand is part of their body. The idea behind this is that the congruence between seeing touch and feeling touch on an object that looks like a hand and is roughly where the hand should be is enough evidence for the brain to make its best guess the fake hand is part of the body)*
  - Conclusion: Even experiences of what our body is a kind of best guess and controlled hallucination.

## Inside Signals

- We don't just experience our bodies as objects in the world from the outside, we also experience them from within (a sense of being a body from the inside).
  - *Interoception* (sensory signals from the inside tell our brain how our heart, organs, etc. are doing); perception and regulation of the internal state of the body is what keeps us alive!
    - *Ex: Virtual reality hand that beats in unison with heartbeat (and turns slightly red) is perceived as being more part of the body than the hand that doesn't.*
- Experiences of the body from the inside are very different from experiences of the body from the outside. We don't perceive our insides as objects and don't, in fact, experience them at all unless they go wrong.
  - Perception of the internal state of the body isn't about figuring out what's there, it's about control and regulation (keeping physiological variables in line with survival).
- When the brain uses predictions to figure out what's there we perceive objects (as the causes of sensations) ; when it uses predictions to control or regulate things we experience how well or badly that thing is going.

## Some Take-Aways/Implications

- Just as we can misperceive the world, we can misperceive ourselves when the mechanisms of prediction go wrong. Understanding this can be helpful for

psychological and neurological treatments for things like depression because can look at mechanisms rather than treating symptoms.

- What it means "to be me" cannot be reduced to or uploaded to a software program. Just making computers smarter is not going to make them sentient.
  - The prospect of a conscious AI is remote. Why? Because consciousness has less to do with our pure intelligence and more to do with our nature as living and breathing organisms. (You don't have to be smart to suffer, for example, but you do have to be alive).
- Our way of being conscious is just one possible way of being conscious. Other living creatures may have other ways of being conscious. We are all unique but connected. We are part of and not apart from the rest of nature.
- When the end of consciousness comes, there is nothing to be afraid of...nothing at all (because there is nothing outside of life).

### Some Questions

- How does our use and understanding of the world 'self' relate to Seth's version of consciousness? Are we always only *nothing more than our constituent parts*?
- That the brain can "use new predictions to change what we consciously experience" explains why the power of suggestion (marketing) and repetition (marketing) works. But shouldn't this also work in the opposite direction? If the brain is given another set of new predictions, shouldn't our conscious experience change? And if that is the case, why does the saying "you can't teach an old dog new tricks" exist? Why is it sometimes harder to "unlearn" things and how does this relate to our conscious experiences?